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10/043,461	01/10/2002	Haim Weissman	010315	6463

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Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
San Diego, CA 92121-1714

EXAMINER	
DEAN, RAYMOND S	

ART UNIT	PAPER NUMBER
2684	4

DATE MAILED: 06/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/043,461	Applicant(s) WEISSMAN ET AL.	
	Examiner Raymond S Dean	Art Unit 2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 3.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1 – 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cuffaro et al. (US 6,587,686) in view of Fitzgerald (US 6,546,254).

Regarding Claim 1, Cuffaro teaches a method for replacing a remote unit in a communication system, comprising: installing a new remote unit in the place of a removed remote unit (Column 7 lines 48 – 56, the base transceiver station (BTS) is the remote unit, if there is a hardware or software malfunction there can be installation of new software or new hardware which means that there will be a new BTS to replace the old malfunctioning BTS).

Cuffaro does not teach receiving gain characteristics associated with the new remote unit; receiving gain characteristics and attenuation parameters associated with the removed remote unit; calculating attenuation values for the new remote unit based upon the new remote unit gain characteristics and the removed remote gain characteristics and attenuation parameters; and providing the calculated attenuation parameters to the new remote unit.

Fitzgerald teaches receiving gain characteristics associated with a remote unit; receiving gain characteristics and attenuation parameters associated with a remote unit (Column 4 lines 43 – 55, the propagation and path loss database will have the gain characteristics and attenuation parameters associated with each BTS); calculating attenuation values for a remote unit based upon a remote gain characteristics and attenuation parameters; and providing the calculated attenuation parameters to a remote unit (Column 4 lines 43 – 55, the propagation and path loss database will have the gain characteristics and attenuation parameters associated with each BTS thus there is an inherent calculation of attenuation values of each said BTS).

Cuffaro and Fitzgerald both teach a wireless system comprising BTSs thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the gain characteristics and attenuation parameters taught above in Fitzgerald in the wireless system of Cuffaro for the purpose of implementing algorithms for dynamically controlling transmissions such that the available bandwidth of a given radio channel will be increased.

Regarding Claim 2, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 1. Cuffaro further teaches determining that the new remote unit has been installed in the place of the removed remote unit (Figure 2, Column 5 lines 5 – 9, since the MSC can detect if the BTS is malfunctioning and said MSC communicates with said BTS will inherently detect if a new BTS is on-line).

Regarding Claim 3, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 2. Cuffaro further teaches sending a message to a location

in the communication system where the remote unit was installed; and receiving a message from the new remote unit in response to the message sent to the location in the communication system where the removed remote unit was installed (Figure 2, the MSC serves multiple BTSs thus this is an inherent characteristic).

Regarding Claim 4, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 3. Fitzgerald further teaches wherein the message sent is directed to a remote unit ID code (Column 4 lines 50 – 52).

Regarding Claim 5, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 3. Fitzgerald further teaches wherein the message sent requests a unique remote unit identifier (Column 4 lines 50 – 52).

Regarding Claim 6, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 5. Cuffaro further teaches the new remote unit sending a message in response to the request (Figure 2, there is a bi-directional communication link between the MSC and the BTSs served by said MSC thus this is an inherent characteristic). Fitzgerald further teaches a unique remote unit identifier (Column 4 lines 50 – 52).

Regarding Claim 7, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 6. Cuffaro further teaches determining that the removed remote unit has been replaced with the new remote unit (Figure 2, Column 5 lines 5 – 9, there is a bi-directional communication link between the MSC and the BTSs served by said MSC thus said MSC will inherently detect when a new BTS is on-line). Fitzgerald

further teaches comparing the unique remote unit identifier (Column 4 lines 50 – 53, the central point knows all of the BTS identifiers thus this is an inherent characteristic).

Regarding Claim 8, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 1. Fitzgerald further teaches adjusting the attenuation for a remote unit based upon the gain characteristics of said remote unit, the gain characteristics of the other remote units and the calculated attenuation parameters of the said other remote units (Column 4 lines 43 – 55, the propagation and path loss database will have the gain characteristics and attenuation parameters associated with each BTS).

Regarding Claim 9, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 8. Fitzgerald further teaches sending the processed IF attenuation parameters to the remote unit; and said remote unit setting its IF attenuators to the reported values (Column 4 lines 43 – 55, the propagation and path loss database will have the gain characteristics and attenuation parameters associated with each BTS such that each said BTS can configure it's attenuators).

Regarding Claim 10, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 1. Fitzgerald further teaches wherein the recalled parameters are recalled from a master system unit (Column 4 lines 43 – 53, the central control unit is the master system unit).

Regarding Claim 11, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 10. Fitzgerald further teaches wherein the master system unit further comprises memory with stored parameters from the remote unit, the stored

parameters including: gain characteristics and attenuation parameters from the said remote unit; a unique remote unit identifier assigned to the said remote unit; and a remote unit ID code assigned to the said remote unit (Column 4 lines 43 – 55).

Regarding Claim 12, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 8. Fitzgerald further teaches determining new IF attenuation values for an IF forward link attenuator; determining new IF attenuation values for an IF reverse link attenuator; and sending the IF attenuation values to the remote unit (Column 4 lines 43 – 55).

Regarding Claim 13, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 12. Fitzgerald further teaches setting at least one attenuator in the remote unit based upon the determined IF attenuation values (Column 4 lines 43 – 53, the propagation and path loss database will have the gain characteristics and attenuation parameters associated with each BTS such that each said BTS can configure it's attenuators).

Regarding Claim 14, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 12. Fitzgerald further teaches recalling an attenuation value for the forward link IF attenuator of the remote unit; receiving the forward-gain-zero value for said remote unit; subtracting the forward-gain-zero value for said remote unit from the attenuation value for the forward link IF attenuator of said remote unit to determine a forward link differential value (Column 4 lines 43 – 55, the propagation and path loss database will have the gain characteristics and attenuation parameters associated with each BTS such that each said BTS can configure it's attenuators for

transmission on the forward link and reception on the reverse link); recalling a forward-gain-zero value for the remote unit; and adding the forward-gain-zero value for said remote unit to the forward link differential value (Column 4 lines 43 – 55, the propagation and path loss database will have the gain characteristics and attenuation parameters associated with each BTS such that each said BTS can configure it's attenuators for transmission on the forward link and reception on the reverse link).

Regarding Claim 15, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 14. Fitzgerald further teaches recalling an attenuation value for the reverse link IF attenuator of the remote unit; receiving the reverse-gain-zero value for said remote unit; subtracting the reverse-gain-zero value for said remote unit from the attenuation value for the reverse link IF attenuator of said remote unit to determine a reverse link differential value (Column 4 lines 43 – 55, the propagation and path loss database will have the gain characteristics and attenuation parameters associated with each BTS such that each said BTS can configure it's attenuators); recalling a reverse-gain-zero value for the remote unit; and adding the reverse-gain-zero value for said remote unit to the reverse link differential value (Column 4 lines 43 – 55, the propagation and path loss database will have the gain characteristics and attenuation parameters associated with each BTS such that each said BTS can configure it's attenuators for transmission/reception on the forward/reverse link).

Regarding Claim 16, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 12. Fitzgerald further teaches storing the new IF attenuation

values in a master system unit memory (Column 4 lines 43 – 53, the central control unit has a databases and therefore memory).

Regarding Claim 17, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 16. Fitzgerald further teaches the master system unit storing the new IF attenuation values in a remote unit table (Column 4 lines 43 – 53, the propagation path loss database is the remote unit table).

Regarding Claim 18, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 8. Fitzgerald further teaches wherein the gain characteristics of the remote unit are recalled from a remote unit table (Column 4 lines 43 – 55).

Regarding Claim 19, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 18. Fitzgerald further teaches wherein the remote unit table is located within a master system unit (Column 4 lines 43 – 55, the central control unit is the master system unit).

Regarding Claim 20, Cuffaro teaches a method for replacing a remote unit in a communication system, comprising: determining that a removed remote unit has been removed; determining that a new remote unit has been installed in the place of the removed remote unit (Figure 2, Column 5 lines 5 – 9, Column 7 lines 48 – 56, the base transceiver station (BTS) is the remote unit, if there is a hardware or software malfunction there can be installation of new software or new hardware which means that there will be a new BTS to replace the old malfunctioning BTS, there is a bi-directional link between the MSC and the BTSs which said MSC serves thus said MSC will inherently determine when a new BTS is on-line).

Cuffaro does not teach recalling gain characteristics associated with the removed remote unit; receiving gain characteristics from the new remote unit; calculating IF attenuation parameters for the new remote unit; and providing the calculated parameters to the new remote unit.

Fitzgerald teaches recalling gain characteristics associated with the remote unit; receiving gain characteristics from a remote unit; calculating IF attenuation parameters for a remote unit; and providing the calculated parameters to a remote unit (Column 4 lines 43 – 55, the propagation and path loss database will have the gain characteristics and attenuation parameters associated with each BTS such that each said BTS can configure it's attenuators).

Cuffaro and Fitzgerald both teach a wireless system comprising BTSs thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the gain characteristics and attenuation parameters taught above in Fitzgerald in the wireless system of Cuffaro for the purpose of implementing algorithms for dynamically controlling transmissions such that the available bandwidth of a given radio channel will be increased.

Regarding Claim 21, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 20. Cuffaro further teaches sending a message to a remote unit in the communication system where the remote unit was installed; and receiving a message from the new remote unit in response to the message sent to the remote unit in the communication system where the removed remote unit was installed (Figure 2, there is a bi-directional communication link between the MSC and all the BTSs which

said MSC serves thus there will be messages transmitted and received). Fitzgerald further teaches a remote unit ID code (Column 4 lines 50 – 52).

Regarding Claim 22, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 21. Fitzgerald further teaches wherein the message sent requests a unique remote unit identifier (Column 4 lines 50 – 52).

Regarding Claim 23, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 22. Cuffaro further teaches the new remote unit sending a message in response to the request (Figure 2, there is a bi-directional communication link between the MSC and the BTSs served by said MSC thus this is an inherent characteristic), determining that the removed remote unit has been replaced with the new remote unit (Figure 2, Column 5 lines 5 – 9, there is a bi-directional communication link between the MSC and all the BTSs which said MSC serves thus said MSC will inherently determine that old BTSs are removed and new BTSs are on-line). Fitzgerald further teaches a unique remote unit identifier (Column 4 lines 50 – 53), comparing the unique remote unit identifier (Column 4 lines 50 – 53, the central point knows all of the BTS identifiers thus there will be a inherent comparison).

Regarding Claim 24, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 20. Fitzgerald further teaches recalling gain characteristics attenuation parameters of a remote unit; receiving gain characteristics of a remote unit (Column 4 lines 43 – 55, the propagation and path loss database will have the gain characteristics and attenuation parameters associated with each BTS such that each said BTS can configure it's attenuators); determining attenuation parameters of a

remote unit based upon the gain characteristics and attenuation parameters of a remote unit and sending the attenuation parameters to a remote unit (Column 4 lines 43 – 55, the propagation and path loss database will have the gain characteristics and attenuation parameters associated with each BTS such that each said BTS can configure it's attenuators).

Regarding Claim 25, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 20. Fitzgerald further teaches wherein the recalled parameters are recalled from a master system unit (Column 4 lines 43 – 55, the central control point is the master system unit).

Regarding Claim 26, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 24. Fitzgerald further teaches determining new IF attenuation values for an IF forward link attenuator; determining new IF attenuation values for an IF reverse link attenuator; and adjusting the parameters for the remote unit based upon the determined IF attenuation values (Column 4 lines 43 – 55, the propagation and path loss database will have the gain characteristics and attenuation parameters associated with each BTS such that each said BTS can configure it's attenuators for transmission/reception on the forward/reverse link).

Regarding Claim 27, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 26. Fitzgerald further teaches setting at least one attenuator in the remote unit based upon the determined IF attenuation values (Column 4 lines 43 – 55, the propagation and path loss database will have the gain characteristics and

attenuation parameters associated with each BTS such that each said BTS can configure it's attenuators).

Regarding Claim 28, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 26. Fitzgerald further teaches recalling an attenuation value for the forward link IF attenuator of the remote unit; recalling a forward-gain-zero value for said remote unit; subtracting the forward-gain-zero value for said remote unit from the attenuation value for the forward link IF attenuator of said remote unit to determine a forward link differential value (Column 4 lines 43 – 55, the propagation and path loss database will have the gain characteristics and attenuation parameters associated with each BTS such that each said BTS can configure it's attenuators for transmission/reception on the forward/reverse link); receiving the forward-gain-zero value for the remote unit; and adding the forward-gain-zero value for said remote unit to the forward link differential value (Column 4 lines 43 – 55, the propagation and path loss database will have the gain characteristics and attenuation parameters associated with each BTS such that each said BTS can configure it's attenuators for transmission/reception on the forward/reverse link).

Regarding Claim 29, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 12. Fitzgerald further teaches recalling an attenuation value for the reverse link IF attenuator of the remote unit; recalling a reverse-gain-zero value for said remote unit; subtracting the reverse-gain-zero value for said remote unit from the attenuation value for the forward link IF attenuator of said remote unit to determine a reverse link differential value (Column 4 lines 43 – 55, the propagation and path loss

database will have the gain characteristics and attenuation parameters associated with each BTS such that each said BTS can configure it's attenuators for transmission/reception on the forward/reverse link); receiving the reverse-gain-zero value for the remote unit; and adding the reverse-gain-zero value for said remote unit to the reverse link differential value (Column 4 lines 43 – 55, the propagation and path loss database will have the gain characteristics and attenuation parameters associated with each BTS such that each said BTS can configure it's attenuators for transmission/reception on the forward/reverse link).

Regarding Claim 30, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 26. Fitzgerald further teaches the master system unit storing the new IF attenuation values (Column 4 lines 43 – 53).

Regarding Claim 31, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 30. Fitzgerald further teaches the master system unit storing the new IF attenuation values in a remote unit table (Column 4 lines 43 – 55, the propagation path loss database is the remote unit table).

Regarding Claim 32, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 24. Fitzgerald further teaches wherein the gain characteristics of the remote unit are recalled from a remote unit table located within a master system unit (Column 4 lines 43 – 55).

Regarding Claim 33, Cuffaro teaches a system for replacing a remote unit in a communication system, comprising: a new remote unit being electronically connected to the master system unit, removed remote unit (Figure 2, Column 7 lines 48 – 56, the

base transceiver station (BTS) is the remote unit, if there is a hardware or software malfunction there can be installation of new software or new hardware which means that there will be a new BTS to replace the old malfunctioning BTS).

Cuffaro does not teach a master system unit having a memory component, the master system unit memory component including stored parameters from a removed remote unit.

Fitzgerald teaches a master system unit having a memory component, the master system unit memory component including stored parameters from a remote unit (Column 4 lines 43 – 55, the central control unit is the master system unit).

Cuffaro and Fitzgerald both teach a wireless system comprising BTSs thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the memory including the stored parameters taught above in Fitzgerald in the wireless system of Cuffaro for the purpose of implementing algorithms for dynamically controlling transmissions such that the available bandwidth of a given radio channel will be increased.

Regarding Claim 34, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 33. Cuffaro further teaches the new remote unit having a memory component; and the new remote unit memory component including stored parameters from the removed remote unit (Figure 2, Column 7 lines 48 – 56, BTSs inherently have memory, the new BTS will be in the same location as the old BTS the propagation loss characteristics will therefore be the same for said new BTS, the new

BTS will therefore have some attenuation and gain parameters that are the same as the old BTS).

Regarding Claim 35, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 34. Cuffaro further teaches wherein the master system unit and the new remote unit are electronically connected by a wire (Figure 2, MSCs and BTSs can be connected by wires).

Regarding Claim 36, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 33. Fitzgerald further teaches gain characteristics from the remote unit; a unique remote unit identifier assigned to said remote unit; and a remote unit ID code assigned to said remote unit (Column 4 lines 50 – 53).

Regarding Claim 37, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 33. Fitzgerald further teaches IF attenuation values for an IF forward link attenuator; IF attenuation values for an IF reverse link attenuator (Column 4 lines 43 – 55, the propagation and path loss database will have the gain characteristics and attenuation parameters associated with each BTS such that each said BTS can configure it's attenuators); forward insertion loss value of the IF cable connecting the master system unit and the remote unit; and reverse insertion loss value of the IF cable connecting the master system unit and the remote unit (Column 4 lines 43 – 55, the propagation and path loss database will have the gain characteristics and attenuation parameters associated with each BTS such that each said BTS can configure it's attenuators, this also includes cable insertion losses).

Regarding Claim 38, Cuffaro in view of Fitzgerald teaches all of the claimed limitations recited in Claim 37. Fitzgerald further teaches wherein the stored parameters for the master system unit are located in a remote unit table (Column 4 lines 50 – 53, the propagation path loss database is the remote unit table).

Conclusion

3. Any inquiry concerning this communication should be directed to Raymond S. Dean at telephone number (703) 305-8998.

If attempts to reach examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung, can be reached at (703) 308-7745. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology center 2600 only)

Hand – delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

NAY MAUNG
SUPERVISORY PATENT EXAMINER